IN THE CLAIMS

I claim:

1 - 71 (cancelled).

72. (previously presented) A kit for generating a perioperative genomic profile for a subject, comprising:

a) reagents configured such that when exposed to a sample containing target nucleic acid from a perioperative subject, said subject being a patient scheduled for a surgical procedure that has not yet completed said surgical procedure, are sufficient to detect the presence or absence of variant alleles in two or more genes associated with two or more conditions selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNF*α and *TNF*β so as to generate a genomic profile for use in selecting a perioperative course of action for said subject; and

b) a computer program comprising instructions which direct a processor to analyze data derived from use of said reagents.

73. (previously presented) The kit of claim 72, wherein said instructions translate said data into information of predictive value for a clinician.

74. (previously presented) The kit of claim 72, wherein said instructions translate said data into a risk assessment for treatment options.

75. (previously presented) The kit of claim 72, wherein said instructions translate said data into recommendations for treatment options.

76. (previously presented) The kit of claim 72, wherein said instructions generate a report for display to a clinician.

77. (previously presented) The kit of claim 76, wherein said display is in the form of a report that can be printed.

78. (previously presented) The kit of claim 76, wherein said display is in the form of a report on a computer monitor.

79. (previously presented) The kit of claim 72, wherein said instructions are sufficient to receive, process and transmit said data to and from said subject, a clinical laboratory and medical personnel.

80. (previously presented) The kit of claim 79, wherein said transmitting of said data uses an electronic communication system.

81. (previously presented) The kit of claim 80, wherein said electronic communication system transmits said data to a distant computer system for processing.

82. (previously presented) The kit of claim 72, wherein said instructions direct the fate of said data according to said subject's preference.

83. (previously presented) The kit of Claim 72, wherein said instructions comprise information to optimize perioperative care that, based on at least the presence of variant alleles of two or more genes associated with two or more conditions selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNF*α and *TNF*β, directs a user to a specific perioperative clinical pathway for said subject.

84. (previously presented) A kit for generating a perioperative genomic profile for a subject, comprising:

a) reagents configured such that when exposed to a sample containing

target nucleic acid from a perioperative subject, said subject being a patient scheduled for a surgical procedure that has not yet completed said surgical procedure, are sufficient to detect the presence or absence of variant alleles in two or more genes associated with two or more conditions selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNF*α and *TNF*β so as to generate a genomic profile for use in selecting a perioperative course of action for said subject; and

b) a computer program comprising instructions which direct a processor to analyze data derived from use of said reagents to indicate an anesthesia treatment course of action.

85. (previously presented) The kit of Claim 84, wherein said instructions indicate a general anesthesia treatment course of action.

86. (previously presented) The kit of Claim 85, wherein said general anesthesia is an inhalational treatment course of action.

87. (previously presented) The kit of Claim 85, wherein said general anesthesia is an intravenous treatment course of action.

88. (previously presented) The kit of Claim 85, wherein said general anesthesia is a combined inhalational and intravenous treatment course of action.

89. (previously presented) The kit of Claim 84, wherein said instructions indicate a regional anesthesia treatment course of action.

90. (previously presented) The kit of Claim 84, wherein said instructions indicate a combined regional and general anesthesia treatment course of action.

91. (previously presented) The kit of Claim 84, wherein said instructions indicate an anesthesia treatment course of action during a medical procedure.

92. (previously presented) The kit of Claim 84, wherein said instructions indicate dosages of analgesic compounds.

93. (previously presented) The kit of Claim 84, wherein said instructions indicate increasing the dosage of analgesic compounds metabolized by CYP2D6.

94. (previously presented) The kit of Claim 84, wherein said instructions indicate decreasing the dosage of analgesic compounds metabolized by CYP2D6.

95. (previously presented) The kit of Claim 84, wherein said instructions indicate prophylaxis for thrombosis.

96. (previously presented) The kit of Claim 84, wherein said instructions indicate increasing prophylaxis for thrombosis mediated by variant alleles of *F5, F2, MTHFR, MTR, MTRR,* and *CBS.*

97. (previously presented) The kit of Claim 84, wherein said instructions indicate decreasing prophylaxis for thrombosis mediated by variant alleles of *F5, F2, MTHFR, MTR, MTRR,* and *CBS.*

98. (previously presented) The kit of Claim 84, wherein said instructions indicate monitoring procedures.

99. (previously presented) The kit of Claim 84, wherein said instructions indicate pre-operative phenotypic tests and consultations.

100. (previously presented) The kit of Claim 84, wherein said instructions provide a prognosis after an anesthesia treatment course of action.

101. (previously presented) A kit for generating a perioperative genomic profile for a subject, comprising:

a) reagents configured such that when exposed to a sample containing target nucleic acid from a perioperative subject, said subject being a patient scheduled for a surgical procedure that has not yet completed said surgical procedure, are sufficient to detect the presence or absence of variant alleles in two or more genes associated with two or more conditions selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNF*α and *TNF*β so as to generate a genomic profile for use in selecting a perioperative course of action for said subject; and

b) a computer program comprising instructions which direct a processor to analyze data derived from use of said reagents to indicate a surgical treatment course of action.

102. (previously presented) The kit of Claim 101, wherein said instructions indicate a non-invasive surgical treatment course of action.

103. (previously presented) The kit of Claim 101, wherein said instructions indicate an invasive surgical treatment course of action.

104. (previously presented) The kit of Claim 101, wherein said instructions provide a prognosis after a surgical treatment course of action.

105. (previously presented) The kit of Claim 101, wherein said instructions indicate a post-operative treatment course of action.

106. (previously presented) A perioperative genomic profile kit having component parts configured such that when exposed to a sample containing target nucleic acid from a perioperative subject, said subject being a patient scheduled for a surgical

procedure that has not yet completed said surgical procedure, are sufficient to detect the presence or absence of variant alleles in two or more genes associated with two or more conditions selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNFα* and *TNFβ*, so as to generate a genomic profile for use in selecting a perioperative course of action for said subject and thereby providing a subject-specific clinical pathway for said subject, comprising information to optimize perioperative care that, based at least on the presence or absence of said variant alleles of two or more genes associated with two or more conditions selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNFα* and *TNFβ* measured by said kit, directs a user to a specific clinical pathway of medical intervention for said subject.

107. (previously presented) A perioperative genomic profile kit having component parts configured such that when exposed to a sample containing target nucleic acid from a perioperative subject, said subject being a patient scheduled for a surgical procedure that has not yet completed said surgical procedure, are sufficient to detect the presence or absence of variant alleles in two or more genes associated with two or more conditions selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNFα* and *TNFβ*, so as to generate a genomic profile for use in selecting a perioperative course of action for said subject and thereby providing a subject-specific clinical pathway for said subject, comprising information to optimize perioperative care that, based at least on the presence or absence of said variant alleles of two or more genes associated with two or more conditions selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNFα* and *TNFβ* measured by said kit, directs a user to a specific clinical pathway of anesthesia intervention for said subject.

108. (previously presented) The kit of claim 72, wherein said reagents are sufficient to detect the presence or absence of variant alleles in each of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNFα* and *TNFβ.*

109. (previously presented) The kit of claim 84, wherein said reagents are sufficient to detect the presence or absence of variant alleles in each of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNF*α and *TNF*β.

110. (previously presented) The kit of 101, wherein said reagents are sufficient to detect the presence or absence of variant alleles in each of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNF*α and *TNF*β.

111. (previously presented) The kit of claim 106, wherein said component parts are sufficient to detect the presence or absence of variant alleles in each of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNF*α and *TNF*β.

112. (previously presented) The kit of claim 107, wherein said component parts are sufficient to detect the presence or absence of variant alleles in each of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNF*α and *TNF*β.